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THE Journal of the Society of Arts,

AND OF

THE INSTITUTIONS IN UNION.

111TH SESSION.]

FRIDAY, AUGUST 4, 1865.

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Proceedings of the Society.

MUSICAL EDUCATION COMMITTEE.

The following is the memorial of the Royal Academy of Music praying for the grant of a site on the Kensington-gore estate, addressed to the Commissioners of the Exhibition of 1851:

The directors of the Royal Academy of Music beg leave to submit, for the consideration of the Commissioners of the Exhibition of 1851, a statement of the nature and objects of this Institution, with a request that a site may be assigned to them on the estate at Brompton belonging to the Commissioners, for the purpose of erecting a building suitable for the accommodation of the Royal Academy of Music.

In the year 1822 Lord Westmoreland brought forward a plan for the establishment of an academy for the instruction of music in all its branches, for which, up to that time, no general school or institution existed in this country. This plan was approved of by his late Majesty George the Fourth, and, thus recommended, a considerable subscription was in a short time obtained, and the Academy was established in the following year.

In 1830 a charter of incorporation was granted, constituting the Institution a corporate body, under the title of "The Royal Academy of Music."

In 1834 a fourth part of the proceeds of the Great Festival in Westminster Abbey, amounting to £2,250, was given to the Academy, which sum was invested in the names of trustees, and the interest appropriated to the establishment of King's scholarships. Two scholars, one female and one male, are elected every year for the term of two years, so that there are always four on the foundation; these receive their musical education gratuitously.

The number of pupils received into the Institution since its foundation amounts to nine hundred and seventy-eight. Many of these now hold the first position in the principal orchestras of the country, many have distinguished themselves as vocalists, and some have sustained a high reputation as composers; and there can be no doubt that the great majority of the pupils, who have qualified themselves to act as teachers, have materially contributed not only to the present state of improvement in the art, but also to the establishment of a better system of instruction in the metropolis as well as in the country.

The number of students at present in the Academy is

one hundred and twenty-one in all; namely, seventy-four females and forty-seven males; a strong proof of the high estimation in which it is held by those persons who are connected with the musical profession, more especially as, from the want of other funds, the students are required to pay nearly the whole expense of their education.

The income of the Academy has for some years been about £4,000, the greater portion of which, about £3,500, is derived from the contributions of the pupils. The interest on the funded property, £7,500, is £236, and the amount of the subscriptions about £300 per annum.

This short account will be sufficient to show the nature and objects of the Institution. As an educational establishment, the Royal Academy of Music has eminently fulfilled the purpose intended when the means at its disposal are taken into consideration. But the state of the funds has not, at any period, been in a prosperous condition; indeed, it has had to contend against pecuniary difficulties of such a character as, on more than one occasion, to threaten its very existence.

The actual amount of the funds, after all debts shall have been paid, is about £6,500, including the grant from the Westminster Abbey Festival. The committee, therefore, have only a sum of about £4,000 at their disposal to apply to any building purposes—a sum barely sufficient to make the necessary provision for the accommodation of the Academy in the event of a site being given up to it.

It might, however, be highly desirable to combine, with the rooms required specially for the use of the Academy, a large music hall, a music library, and rooms for the exhibition of musical instruments, which would not only be highly serviceable to the musical public generally, but have become almost necessary from the present advanced state of the art.

The cost of such buildings would probably be about £20,000, a sum far beyond what the directors of the Institution could provide. But as the large music hall might be available for other public bodies who might hereafter be located on the property of the Commissioners, some assistance might be obtained from them. A sum of money may possibly be obtained on debentures, to be issued on the security of the buildings, from persons interested in the advance of the musical art; it being understood that the large room might be let for concerts, or holding public meetings, under such regulations as may be approved of by the Commissioners.

The plans of any building proposed to be erected would, of course, be submitted to the Commissioners for their approval; but should it be necessary to incur any additional expense on account of external decoration or architectural ornament, the directors of the Royal

Academy of Music venture to hope, that for such expense they might receive some aid from the Commissioners.

LEINSTER.	GEORGE CLERK.
WILTON.	R. R. VVYAN.
HOWE.	A. F. BARNARD.
GERALD FITZGERALD.	JOHN CAMPBELL.
SALTOUN.	QUINTIN DICK.
WROTTESELEY.	WYNDHAM GOOLD.

April, 1856.

Proceedings of Institutions.

Huddersfield Mechanics' Institution.—The twenty-fourth annual report expresses great satisfaction in the fact that the number of pupils attending the classes shows a considerable increase over the previous year. This increase has been chiefly in the junior classes; the senior classes, although showing a slight improvement, have not been attended as numerous as the committee could have wished. The following is a statement of members, exclusive of annual subscribers and honorary members:—1863, fortnightly members 966; presentees 284; females 29—total 1,279. 1864, fortnightly members 1067; presentees 326; females 35—total 1,428. Payment from the pupils, 1863—£315 1s. 6d.; 1864—£336 15s. Annual subscriptions, 1863—£289 16s.; 1864—£265 13s. The committee regret that the members have not availed themselves more of the advantages which the library offers, the issue of books during the past year being only 8,055 against 10,020 in the previous year. The committee have considered the desirability of purchasing a number of new books, in order to make the library more attractive. The fortnightly meetings have been eminently successful, and the best thanks of the committee are due to those ladies and gentlemen who have so kindly given their services gratuitously. The lectures and concerts during the past year were numerous. Amongst the former may be mentioned one by Mr. J. Bower, "Popular Delusions;" one by Mr. Thomas Westerby, "The Life of Barnum;" one by Mr. J. H. Bower, "Local Politics 500 years ago;" one by Mr. Frank Curzon, "Shakespeare a Workman;" one by Mr. W. F. Crook, "The Manners and Customs of the Chinese;" one by Mr. Wm. White, "Gold and its Properties;" also readings and recitations by Mr. Samuel Laycock, "The Lancashire Poet," and Mr. T. Collins, in the Lancashire dialect. The classes, 88 in number, continue to be the principal feature of the Institution. A canvass has been made amongst the working classes, and small bills have been distributed, pointing out the various advantages which the Institution offers. The best thanks of the committee are due to the voluntary teachers and penny bank assistants for their valuable services during the past year. The attendance in the classes was in 1863—52,739; in 1864—58,326. On the five evenings in the week nearly all the classes are engaged in elementary studies. On Monday, Tuesday, and Thursday reading from good text books, carefully explained by the teachers, forms the basis of the work; and in this way an outline of English history, geography, and some knowledge of grammar is given. On the Monday and Friday nights the classes throughout the Institute are occupied with writing and arithmetic. The drawing classes show a considerable increase in numbers, and the progress of the pupils during the year has been very encouraging. The average monthly attendance of this class was, in 1863—368; and in 1864—482. In connection with the drawing class the thanks of the members are due to Edward Brooke, jun., Esq., who, in the early part of the year, announced a prize of three guineas for the best design of a garden vase. From the drawings of the competitors—each of which are creditable—the judges awarded the prize to Mr. Wm. Catton. Mr. Brooke followed the offer up by another of six guineas, for modelling the vase from the drawing, and the work was being

completed. The singing classes have made considerable advance. The average monthly attendance was, in 1863—164; and in 1864—208. The bookkeeping class keeps up its numbers. The loom class, though not so numerously attended as it ought to be in such a large manufacturing district as Huddersfield, has produced very satisfactory results. In the chemical class the number on the list is 32. The average attendance is 24. The French class has numbered twenty pupils, and the teacher reports their progress as satisfactory. The excursion to Liverpool, notwithstanding its many attractions, proved financially a failure. The weather was very unfavourable, and this in a great measure accounts for the want of success. The committee are greatly indebted to E. A. Leatham, Esq., M. P., for his kindness in permitting a gala to be held in Whiteley-park. The penny savings bank continues to be prosperous. In 1863, the number of depositors was 19,666; withdrawals, 3,805; amount of deposits, £2,045 1s. 1d.; amount of withdrawals, £1,690 15s. 2½d. In 1864, the number of depositors was 18,000; withdrawals, 4,148; amount of deposits, £2,037 16s. 6½d.; amount of withdrawals, £1,957 18s. 7½d. The number of accounts open December 31st, 1863, was 3,849. The number of accounts open December 31st, 1864, was 4,229. Mr. Walter F. Crook has resigned the secretaryship, and Mr. Joseph Bate has been selected as his successor. The cash account shows that the receipts has been £823 0s. 10d.; and that the balance in hand was £72 10s. 11½d.

EXAMINATION PAPERS, 1865.

(Continued from page 538.)

The following are the Examination Papers set in the various subjects at the Society's Final Examinations, held in April, 1865:—

DOMESTIC ECONOMY.

THREE HOURS ALLOWED.

1. Enumerate under different heads what Domestic Economy embraces.
2. What circumstances would influence you in choosing a dwelling house? Show that a house at a low rent may be dearer than one at a greater charge.
3. What are the advantages and disadvantages of living in a town, especially with reference to bringing up a family?
4. Describe a simple and efficient method of ventilating a sitting-room containing an open fire-place.
5. A small bed-room, which has no fire-place, is lighted by a window, which does not open; explain fully why it would be dangerous to sleep in this room with the door shut; and say how you would establish a good system of ventilation in the apartment.
6. What are the objections to a crowded dwelling?
7. Is it an advantage to a labourer to receive his wages in small payments frequently rather than in large payments at greater intervals? Why, morally and economically?
8. Calculate the loss to a working man in the course of the year which would arise from his buying tea and sugar in small instead of large quantities, supposing the family to consist of six persons.
9. Give advice on the management of a family of six persons as regards

- (a.) Food
- (b.) Clothing
- (c.) Dwelling

the wages of the father being 30s. per week.

10. What are the various disadvantages to the family of a working man where the mother is constantly employed away from home?

1. In out-door agricultural employment.
2. In the mills of the manufacturer.

11. How do the above employments affect the future prospects, in industrial life, of children whose mothers are so employed?

12. If you wished to secure a deferred annuity for life, to commence, for instance, at the age of 60, what is the most desirable way of doing so?

13. In what does the post-office savings bank differ from the old-established savings bank?

14. Calculate the relative cost of gas and candles; the gas-burner giving as much light as three tallow candles twelve to the lb., at 6d. per lb.; the three candles burning $1\frac{1}{2}$ hour, and the gas-burner consuming 5 cubic feet of gas in the same time, the gas costing 4s. 6d. per 1,000 cubic feet.

15. How does breathing sustain animal life, and how does it warm the body? What articles of food are principally used by the inhabitants of very cold climates, and why?

16. Class the various articles of food under the heads of:—

- (a.) Flesh formers
- (b.) Heat givers
- (c.) Bone makers.

What article of food combines the three to the greatest extent?

17. In a dietary for children would you allow more or less of flesh-forming food, in proportion, than for an adult? Why?

18. Show that cheap and easily-procured food may not be a constant blessing to the nation possessing it.

19. Can you account for the alteration which takes place in the moral and physical character of a poor Irish labourer after leaving Ireland for one of the colonies?

20. Write a short essay on the value of the potato as an article of food.

POLITICAL AND SOCIAL ECONOMY.

THREE HOURS ALLOWED.

First series to be answered if possible throughout.

1. Who, during this century, have been the most distinguished writers or legislators on subjects of political economy, and with what doctrines are the names of each most connected?

2. What are the four principles of taxation laid down by Adam Smith? Which of them is said to be contrary to the imposition of a duty on malt, and how is that made out?

3. What have been the most remarkable instances of reduced taxation during the last 20 years, and what has been the result of such reduction?

4. What are the objections to the employment of convict labour under the system of assignment, more especially in the case of the skilled labourer?

5. In what way, and from what sources, is London supplied with water; and on what principle is a limit put to the amount of dividend that may be paid to shareholders in water and other similar companies?

Optional Questions.

1. Compare the incidence of taxation on poor and rich.

2. What is the principle according to which the burden of supporting the poor should be apportioned?

3. What do you understand by the principle of reciprocity as applied to commercial treaties; and how far is that principle opposed to the principle of free trade?

4. What is the relation in which profit and interest stand to each other; and in what way does Mr. J. Stuart Mill differ from what he says to be the received notion on this subject?

5. What do you understand by "average" in mercantile language; and what is the difference between general and particular average?

GEOGRAPHY.

THREE HOURS ALLOWED.

1. Taking the eastern coast line of Britain, from the Firth of Forth to the mouth of the Thames, name in successive order the principal headlands, estuaries, river mouths, and seaport towns that fall within its range.

2. Enumerate, in geographical succession, the counties that lie along the west and south-west coasts of Scotland, from Cape Wrath to the head of the Solway Firth; also the principal seaports within those limits.

3. Make a list of the principal rivers of England and Wales, classifying them as they fall respectively into the German Ocean, the English Channel, the Bristol Channel, or the Irish Sea. Name a town situated upon each.

4. Write a brief account of any one of the countries of Continental Europe, describing its natural features, climate, productions, divisions, and chief towns.

5. Enumerate the North American colonies of Britain, stating briefly the leading characteristics of each, as to position, features, climate, and industrial resources.

6. Write a fuller account of Canada, stating the distinguishing conditions of its eastern and western divisions (Lower and Upper Canada), its industrial resources, and the position of its principal towns.

7. Enumerate the British Colonies on the Australian mainland, with the capital of each. Say which of them includes Cape York, the northernmost extremity of Australia? Which Cape Leeuwin, its S.W. point? Which Spencer's Gulf? Which Port Philip?

8. Draw (from memory) an outline map either of Canada, New South Wales, or Tasmania. Mark on it the chief natural features and the places of a few towns.

9. Give some account of Victoria (Australia): describe its coast line, chief inland features, climate, industrial resources, population (in round numbers), and chief towns.

10. Give a similar description of Queensland.

11. What is known respecting the constant, or periodical, movements of the atmosphere within the warmer latitudes of the globe. State, in general terms, their direction and limits, also the causes to which they are due.

12. What are isothermal lines? In what respect do they differ from parallels of latitude, and how can the difference be explained? Why do they rise on the western side of either continent, and sink as they are prolonged to the eastward?

ENGLISH HISTORY.

THREE HOURS ALLOWED.

N.B.—Dates are to be given in all cases.

1. What were the principal changes effected in England by the Norman Conquest?

2. What was the commencement of the House of Commons, and what have been the chief epochs in the growth of its power?

3. Describe the battle of Crecy.

4. Explain witan, socage, præmunire, impeachment, bill of pains and penalties.

5. What were the claims of Henry VII. to the throne of England?

6. What was the Covenant, and what were its effects?

7. Mention the chief events and measures of the reign of William III.

8. Give a short account of the American War of Independence.

SPECIAL SUBJECT.

9. What were the effects of John's surrender of his crown to the Pope?

10. Give the provisions of Magna Charta.

11. Describe the battle of Lewes.

12. Write the life of Simon de Montfort.

(To be continued.)

COLONISATION ; ITS ASPECTS AND RESULTS.*

By WILLIAM STONES, Esq.

THE GENIUS OF ENGLISHMEN FOR COLONISING.

This is doubtless primarily due to the influences of our geographical position and the geological character of our country.† If we examine a terrestrial globe, it will be found that Great Britain holds the advantageous position of lying close to, and yet detached from, the frontier of the Old World, of which it is the nearest point to the New World, the broad highway of the ocean spreading and stretching from the very doors of her central emporium to the most remote of her customers. This insularity causes easy accessibility from and to all quarters and nations, and gives a much larger amount of coast line than enjoyed by any other nation, as will be seen from the following table:—

Country.	Coast Line.	Square Miles of Surface.
Europe	1 mile to every 156 square miles of surface.	
N. America... 1	" 228	" "
S. America... 1	" 376	" "
Asia..... 1	" 459	" "
Africa..... 1	" 623	" "
France..... 1	" 170	" "
Great Britain. 1	" 57	" "

Her abundance of harbours, and numerous rivers, although insignificantly small compared with many others in the world, being nevertheless of dimensions available for inland navigation, and unobstructed by rapids or waterfalls, conduce to the production of a numerous and bold population, accustomed to brave old ocean in his fiercest wrath.

In 1862 we are reported to have had an aggregate of 424,000 ships, of 61,600,000 gross tonnage, employed in our foreign and coasting trade; and throughout the year nearly fifty vessels, averaging 145 tons each, leave a British port every hour; while a fleet of some hundred yachts, starting on a great sea race from Cowes to Cherbourg—an unintelligible fact to most foreigners—attests the aquatic inclinations of our countrymen.

All English boys have an inborn love of the sea, and the most inland youth is quite willing to run the chance of sickness, provided he can have a sea trip.

With comparative equability of climate—such that the shortest days are sufficiently long, and the longest sufficiently temperate, to allow a reasonable amount of work being daily performed throughout the year—this island of ours is suitably placed for obtaining the largest possible result from human energy, being neither prevented by the short days and the extreme cold of the north nor by the excessive heat of more southern countries; and this expression of national energy, when at all impeded at home, seeks its manifestation abroad. Again, our mineral wealth, arising from the geological nature of the island, leads many seriously and coolly to face danger of another kind. The coal and metal ruiners of England number upwards of a quarter of a million of men—about a twelfth part of the male population of the country—and it is scarcely possible that this body of men can descend into the bowels of the earth, facing the dangers of such an employment, without being confirmed in their self-reliance and adventurous spirit.

Possessing an innate love of independence, and the national self-reliance greatly developed by their pursuits, if we add to the seafaring and mining divisions of the population the speculative spirit of the commercial class and the low condition of agricultural labourers, we find ample reasons and impetus for so many

seeking abroad the accomplishment of their several desires, each emigrant finding in some one or other of our colonies a field suitable for his utmost exertions, the improvement of his fortune, and the acquisition of land, objects so zealously pursued by all Englishmen. The secluded habits of Englishmen enabling so large a proportion of them to exist without café, club, companion, or hotel, is a great feature in a colonising point of view. When his allotment or run has been selected, there he erects a hut or cottage, plants a garden, surrounds himself with a few pet dogs and birds, and settles down in his "home" for years. It is remarkable how even well and highly-educated single men will start off into the bush, and remain, with a herd of cattle or flock of sheep, hundreds of miles from any important town, with a probability of very rarely seeing a white companion other than their own shepherds or stockkeepers. Nothing but an indomitable and self-denying postponement of the present to the future could induce so many to undergo this self-banishment. Present self-restraint and confident persevering hope in the distant future, is the great secret of colonial success. Nor ought we to omit noticing the intense love of sport and general spirit of exploration and adventure which characterize many of those of our countrymen whose fortunes do not compel them to resort to a colony for their subsistence or pecuniary advantage. In a broad sense we may say that to English voluntary exertion most of the exploration of the world is owing, whether it be the north-west passage, the source of the Nile, or the traversing of Australia. All honour to these brave men, whether living or dead.

EFFECTS OF EUROPEAN COLONIZATION UPON OTHER RACES.

For the purposes of this paper, and speaking generally, they may be classed into three groups:—Negroes—Asiatics—Other coloured races. The first have almost invariably been made slaves; the second have been incorporated and treated as fellow-subjects; the fate of the third has been extermination.

A somewhat melancholy reflection must often occur to those who have possessed opportunities of conversing with the original native inhabitants of our colonies, how almost universally there exists a deep-seated sentiment and fearful foreboding, in the minds of the thoughtful amongst them, and many such there are, that their race must disappear before the European.

A strong, firm conviction impresses them, rising at times to a kind of fatalism, that gradually, but as surely as the tide creeps up on the shore, their doom is either to retire, dwindle, and disappear before the pale-faces, to whom will pass the lands of their fathers,—or to die fighting a sad hopeless battle of despair, their feeble gods powerless to sustain them against the fiat of the white man's Deity. Their native habits and customs are unable to endure the shock of collision with a civilization to which they cannot conform, and whose vices tend to their rapid diminution; and the result is the same whether we take the case of the most warlike with whom we have come in contact—the New Zealanders, or on the other hand the very low race of Australians.

The following extract from a Tasmanian newspaper bears on this subject:—

"The Hobart Town Mercury notices the presence at the last government ball in that town of the last living male representative of the aboriginal race of Tasmania, accompanied by three aboriginal women, the sole survivors of their nation on the female side. It is estimated, with some degree of accuracy, that the natives numbered about 2,000 in 1830, but have of late years been rapidly disappearing under the "civilising" influences of the colonial government. In former times they were treated with great cruelty and barbarity by the colonists; but in the year mentioned a plan for transporting them to Flinder's Island, and keeping them there, was adopted. The result, which had been foreseen by many, is shown

* See the Paper read before the Society on the 3rd of May last (p. 405). The present article, which will be followed by others by the same author, treats of portions of the subject which time did not then allow Mr. Stones to touch upon.—Ed. J. S. A.

† See an able article on "The Causes of England's Greatness," in the *Quarterly Journal of Science*, by Mr. Pengelly, January, 1865.

by the four surviving individuals who were present at the governor's ball." The *Hobart Town Mercury* concludes its notice of this incident as follows:—"With whom does the blame of this rest? Most assuredly not altogether with the natives themselves. No one can say with truth that they were not as much sinned against as sinning in disasters that befell them. The original population is gone, and their extinction, as a race, was probably as inevitable as it is inscrutable. As savages they were found, as savages they lived, and as savages they perished. Such an event is deserving of some notice." Is it ever to be so? Is it a necessary law of this earth? Caribs, Red Men, Australians, Tasmanians, New Zealanders all cease, and their places are taken by the Anglo-Saxon race.

In all moderate climates Europeans seem to have supplanted the native races; only in the extremes of hot and cold countries has co-existence been possible; and even in hot climates, harshness of treatment, degradation, and slavery have been the leading characteristics of conduct on the part of the invaders, until, by the almost total disappearance of the aborigines, the necessities of the labour requirements of the colonies have had to be met by the introduction of the hardy African race. Whether, on the whole, that race has to thank or curse our colonisation is a difficult question to answer, as will be evident by a moment's consideration of the moral and social debasement brought upon Africa by its internal wars for the obtaining of slaves for sale, the miseries to which the poor wretches are exposed in transit, and the eventual condition of the slaves, without hope, family, or life, but at the will of others. Every thinking Englishman, who regards the contest recently concluded in North America must feel profoundly thankful that thirty years ago this country roused itself, at the loud call of noble men, some of whom are still amongst us, enjoying a green old age, to incur the expense of redressing a great moral crime, and at the large price of £20,000,000 the blot of slavery was removed from our flag and country. From the 1st August, 1835, no slave has been held by a British subject. Great cost, did we say? Can freedom be dear

at any price! This price vanishes into utter insignificance when compared with the already huge avalanche of debt, some £600,000,000, which is rolling over the States of North America. Throughout that vast continent the serpent still gnaws on, poisoning the roots of all domestic, social, and political happiness, filling the national mind and soul with increasing discord and hatred—bitter, intense, and lasting—the distress of the widow and the wail of the orphan. Attempt to disguise it as we may, the question at the bottom is, slavery—property in human blood and bones—man a chattel. In the interval between the writing and printing these notes, four millions of human beings, without the slightest preparation, have been liberated from slavery. Time only will show whether the feared results will be realised. Truly slavery, whether in its initiative, continuation, or conclusion, is "a bitter draught."

As a memorial of the payment made to clear the British national conscience, the subjoined table of the compensation prices paid to the owners for their slaves in our several colonies may not be without interest; and I submit for consideration when the decay of some of the West India estates is so prominently brought forward, that as the principal item in the value of the properties consisted in the number of slaves, and as they were redeemed by the British public, it would be scarcely fair to expect the plantations to be as profitable as formerly, which seems to have been anticipated by many planters. Time is bringing about a better adaptation to the new state of society.

It has been stated that the emancipated negroes do not increase in numbers as they did whilst in a state of slavery, owing to vicious indulgences. But this statement seems hardly borne out by the population columns; and as the increase cannot be owing to any large influx of Europeans, and the immigration of Coolies can scarcely account for the increment, it must be inferred that the black population does not diminish, as has been supposed, but the contrary.

There is one point of view in connection with the surging

TABLE SHOWING THE HIGHEST AND LOWEST VALUE OF SLAVES IN THE BRITISH COLONIES, AT THE TIME OF THE EMANCIPATION; THE HIGHEST AND LOWEST COMPENSATION GIVEN; THE NUMBER OF SLAVES IN EACH; GROSS AMOUNT PAID TO EACH COLONY; AND THE POPULATION OF EACH COLONY IN 1850 AND 1861.

COLONY.	AVERAGE VALUE OF A SLAVE AS APPRAISED BY VALUERS.		COMPENSATION AWARDED.		Number of Slaves.	Amount of Compensation.			POPULATION.	
	Highest.	Lowest.	Highest.	Lowest.					1850.	1861.
	£	£	£	£		£	s.	d.		
Jamaica	79	33	31	14	255,290	5,853,977	0	11½	377,433	441,255
Barbadoes	100	20	39	7	66,638	1,659,315	0	9	122,198	152,727
Trinidad	170	89	83	44	17,539	973,442	18	2	68,600	84,438
British Guiana	230	93	87	35	69,579	4,068,809	6	4½	127,695	148,026
Tobago	110	40	53	19	9,078	226,745	14	10½	13,028	15,410
Grenada	120	41	60	21	19,009	570,733	1	7½	28,927	31,900
St. Vincent.....	117	60	43	22	18,114	554,716	7	5	30,128	31,755
St. Lucia.....	120	40	50	17	10,328	309,658	17	9	24,516	26,705
Dominica	75	35	23	13	11,664	265,072	1	0	22,220	25,065
Antigua	146	32	35	7	23,350	415,173	14	1½	36,178	36,412
St. Kitts	80	29	40	15	15,667	309,908	5	7½	23,177	24,440
Honduras	225	69	109	29	1,587	96,571	9	6	—	25,635
Bermuda	108	28	31	8	3,314	48,253	18	10	11,092	11,461
Bahamas	80	19	34	8	7,734	118,683	13	11½	23,410	35,487
Cape of Good Hope	158	71	64	29	29,111	1,193,085	8	6	285,279	267,096*
Mauritius	144	52	56	20	56,699	1,986,099	8	2½	180,863	310,050
Montserrat	100	34	25	9	5,026	100,654	0	10	7,355	7,645
Nevis	62	30	24	11	7,225	145,976	19	8½	9,571	9,822
Virgin Islands	85	40	28	13	4,318	70,177	13	2	6,689	6,051

* 1856.

In addition to the pecuniary compensation given, the slaves, it will be recollected, were required to serve an apprenticeship for a term of years—six, if I remember correctly. One extraordinary item is found in the "Antigua" Account, consisting of an appraised value of a slave under the "Aged, diseased, or non-effective" class, 5d., and compensation, 1½d.

over the native populations by the Anglo-Saxon race which must not be altogether omitted, and that is the fact, that where we do not exterminate them, we undoubtedly cause the lower classes amongst them to be treated with more justice than they received under the rule of their native chiefs or princes, and to that extent our governance is an advantage. India may be referred to as, on the whole, affording a satisfactory illustration of the improved condition, under our rule, of the lower classes of the population.

The demand for cotton appears to have thrown a bright and joyous sunlight upon India, and opened to the native population the road to a new status; and while this commercial advantage is felt by its myriad population, even to the very lowest, the wise institution of the Star of India is flattering to the higher classes, satisfying the Eastern craving for decoration. The double passions of wealth and distinction being thus gratified, the recipients are more firmly attached to the empire which confers these advantages upon them.

Fine Arts.

THE PALAIS SCHIARRA AT ROME.—The collection of Prince Schiarrà, which contains some very fine works, amongst others, the "Violin Player," by Raphael; "Vanity and Modesty," by Leonardo da Vinci; a "Saint Sebastian," by Perugino; a "Portrait of Titian," by himself; and a "Magdalen," by Guido Reni, had a very narrow escape the other day when the palace was on fire. Their destruction would have been still more lamentable from the fact that, in consequence of a law suit amongst the heirs of the late Prince, the gallery has been closed for several years, and therefore the works are but little known to amateurs.

ROSA BONHEUR.—This artist received the other day another, but rather costly, proof of the estimation in which her works are held. It will be remembered that some time since she was summoned by a dealer to deliver a picture which she had undertaken to paint for him, and which, for reasons not stated, she refused to do. The court ordered the artist, under penalties, to deliver the work within a given time; against this decision Rosa Bonheur has appealed, and the superior court has condemned her to pay M. Pourchet four thousand francs for not having fulfilled her engagement to paint for him, at a price specified, the picture in question.

TOULOUSE EXHIBITION.—The importance of the provincial exhibitions of pictures in France may be estimated by the fact that the late show of the kind at Toulouse—not one of the principal local exhibitions—included no less than 765 works of art. Of the artists exhibiting, about a hundred and seventy were of Paris, and about the same number belonging to the department of which Toulouse is the chief town.

DECORATIVE SCULPTURE IN PARIS.—The façade of the new buildings of the Palais de Justice is just finished, and exhibits a large amount of sculptural decoration, including six colossal statues in granite—"Prudence and Truth," from the chisel of the late sculptor Duret; "Power and Justice," by M. Jaley; "Punishment and Protection," by M. Jouffroy. An emblematical figure of "The Law," also by M. Duret, is about to be placed at the head of a fine double flight of steps leading to the courts of assize; and over the porch of the same two cariatides supporting the tables of the law and a sitting figure of Justice, by M. Perraud.

PROPERTY IN WORKS OF ART.—A curious question of property in a work of art occurred the other day in Genoa. The picture of the Madonna, by Piola, on the wall of a house in the Rue des Orfèvres in that town, is well known to all artistic travellers. The property in this work has been for a long time contested by the authorities of the town, the proprietor of the house, and other persons. The matter has recently been decided by the Court of

Appeal, which pronounced that the picture in question, which is on the public way, should be considered as public property, and not to be alienated for purposes of private speculation of any kind whatever! The evidence adduced before the judges is not given in the report, but it is to be presumed, in order to account for such a decision, that the origin and true proprietorship of the work were involved in perplexity, and that the only way of undoing the knot was to cut it.

ANTIENf SILVER WARE.—An interesting specimen of very old chased-work in silver has recently been discovered, during the demolition of a house at Toulon, believed to be of Roman construction. It is a *bénitier de famille*, or vessel for holding holy water, in a private apartment, and consists of a small cup or tazza, suspended by a chain from a winged figure, all in massive silver, and ornamented in *repoussé* by the hammer, in the style of the early period of the Christian era. It was destined to the melting pot, when M. Comte, a watchmaker, rescued it from destruction.

Manufactures.

PORTUGUESE EXHIBITION.—The Portuguese authorities, by way of marking their appreciation of the readiness exhibited by the French government in contributing specimens of the productions of the Imperial factories of Sèvres, the Gobelins, and Beauvais, have called a special meeting of the commission at Oporto, and have passed an official vote of thanks to the Imperial government, at the same time nominating M. de Gérande, the French Consul at Oporto, and who was previously a member of the grand council of the exhibition, a member of the central executive committee.

BISMUTH.—This metal has of late years risen considerably in price. Amongst other causes, some journals have stated that two or three years ago a company was formed to work an invention by which gold was to be made by the transmutation of bismuth into that metal, and that large quantities of the former metal had been bought up for this purpose. Whether such an enterprise was or was not entered upon does not appear. The following is a list of the prices:—

1844	.....	10d.	to	2s. 0d.	per lb.
1845	.....	2s. 0d.	"	4s. 0d.	"
1846	.....	4s. 0d.	"	3s. 3d.	"
1847	.....	3s. 3d.	"	2s. 6d.	"
1848	.....	2s. 6d.	"	2s. 0d.	"
1849	.....	2s. 0d.	"	2s. 6d.	"
1850	.....	2s. 6d.,	2s.,	2s. 6d.	"
1851	.....	"	"	"	"
1852	.....	"	"	"	"
1853	.....	"	"	"	"
1854	.....	"	"	"	"
1855	.....	"	"	"	"
1856	.....	"	"	"	"
1857	.....	"	"	"	"
1858	.....	2s. 6d.	to	3s. 6d.	"
1859	.....	3s. 6d.	"	4s. 6d.	"
1860	.....	4s. 6d.	"	6s. 6d.	"
1861	.....	6s. 6d.	"	9s. 6d.	"
1862	.....	{ 9s. 6d.	"	20s. 0d.	" in July.
		{ 11s. 0d.	"	...	" in Dec.
1863	.....	11s. 0d.	"	10s. 6d.	"
1864	.....	10s. 6d.	"	11s. 0d.	"
1865	.....	10s. 6d.	"	11s. 0d.	"

Up to 1844 a large quantity of bismuth was produced in this country from cobalt ores in the old way of refining, but a new way of treating such ores, then introduced, necessitated the loss of much of the bismuth, and since that time we have been chiefly supplied from the Saxon and Bohemian mines. In 1845 there was a large demand for a composition to make rollers for calico-printers, raising the price for a few months. In 1858 the

supply began to fall off, and in 1861-2 there was a very large extra demand for medicinal preparations, which, to a certain extent, still continues, but the demand for mechanical use has since that time been very trifling. New sources of supply are opening, and prices, it is said on good authority, are likely to fall.

THE SILKWORM culturists in France announce the birth or hatching of the larva of the *Bombyx atlas*, an enormously large silk moth. This gigantic moth has never before been seen alive in Europe; and if it can be introduced into France it will prove of the greatest commercial value. Its cocoon is extremely large, and weighs nine grammes, whilst those of the ordinary worm do not exceed two grammes in weight. The grub lives on the leaves of a species of barberry shrub.

NEW MODE OF PREPARING WORT.—The *Brewers' Journal* states that an invention has been registered by M. Hychert, of Paris, for a new way of preparing wort in the making of beer. His plan is as follows:—"I throw upon the ground malt, intended for the vat, enough cold water to form a thick mass. I take care to mix well the malt, to let the water penetrate into all its parts. I then let the mixture remain for about an hour, to obtain the dissolution of the diastase; at the end of that time the excess of water is let out containing the dissolved diastase. Stirring well, I add to the mass in the vat or copper, whichever it may be, which still contains a notable quantity of diastase, a sufficient quantity of hot water to arrive at a temperature of 75 deg. The mixture being perfectly homogeneous, I let it remain some time, and then boil it or let it attain at least a temperature of 90 deg., be it in the vat (if there is a way of introducing steam) or be it in the copper, but mind and stir it well, or the malt will adhere to the sides of the vat or copper. Keep it boiling for about an hour, taking care to stir it constantly; remove it then to the vat (if the boiling has been effected in a copper), and let it cool down to 75 deg.; now should be added the best part of the dissolved diastase, which being nearly cold, produces a fresh coldness. All this should be done whilst stirring, which must be continued for some time afterwards. Let the mass stand for about another hour, and then let off the wort, which, if the tempering has been successful, should be quite bright and clear, having a soft and agreeable taste. You may now add to that remaining in the vat the rest of the dissolved diastase and enough water to raise the temperature to 75 deg., and again proceed in the manner before advised. If the malt in the first place has been properly ground from the first tempering, nearly all the starch will have been turned to sugar; but if the ground malt has not been enough crushed, you make with profit a third or several temperings, in which case you must be careful of your diastase. By this proceeding all the existing starch is converted into sugar, which augments considerably the quantity of wort, and makes it singularly bright and clear; it does not contain any particle of amidine, and is perfectly free from dextrine; and, again, being nearly all sugar, it results that the beer manufactured has a very agreeable taste, and will keep a considerable time without turning sour."

Commerce.

THE FRENCH WINE TRADE.—The vines everywhere promise well, presenting a brilliant aspect, which induces great hopes both in respect to quality and quantity. In most vineyards the vintage will begin early this year.

GERMAN YEAST.—The payments made for German dried yeast during the last ten years will probably excite some surprise from their magnitude. In 1855, the value of this import was £143,851; in 1856, £171,374; in 1857, £180,378; in 1858, £111,539; in 1859, £172,215; in 1860, £184,079; in 1861, £186,337; in 1862, £204,404;

in 1863, £209,837; and in 1864, £231,748; a yearly increasing amount, and forming an aggregate value in the ten years of more than one million and three-quarters sterling for this simple article.

CHINESE TEA AND SILK.—The shipments from Chinese ports to the latest dates were 117,913,545lbs. of tea, being 722,202lbs. above last year's export, and 30,719 bales of silk, nearly 10,000 bales less than last season.

HOPS.—While the import of foreign grown hops appear to have fallen off this year, they have very greatly increased since 1850. In that year the imports were 6,479 cwt.; in 1854, 119,040 cwt.; in 1861, 149,176 cwt.; and in 1863, 147,281 cwt. The value has increased considerably. In 1860, £568,901; in 1861, £657,763; in 1862, £723,034; in 1863, £626,660; in 1864, £549,863.

TIMBER AND WOOD.—There seems an increasing demand for timber, judging by the increase in the imports of last year. In 1855 the value of the timber and wood imported was £3,567,870; in 1860, '61 and '62, an average of £4,500,000; in 1863 and '64, nearly £5,000,000.* Of these sums foreign timber and wood contributed in 1855, £1,645,108; in 1860, £2,238,021; and in 1864, £2,569,585.

WOOL.—There is not an active demand for English wool among the staplers in the manufacturing districts, and the collectors of wool do not find it easy to sell at rates current a few weeks past. There is, however, more than an average consumption, and prices can hardly be quoted lower. The manufacturers are well employed in the clothing districts, and the value of colonial and other wool is well sustained. The progress of the woollen trade has fully kept pace with, and perhaps outstripped, the advance in the imports of the raw material. Thus the value of the woollen and worsted manufactures exported from the United Kingdom in 1850, was £8,588,690. In 1853 it made a bound to £10,172,182; in 1859 they made another great stride, going to £12,053,708. In 1862 they rose to £13,148,431; and, in 1864, to £18,566,078. Last year's figures were of course swollen by the high price of raw material, but 1864 was, nevertheless, a progressive period. These details refer wholly to the export trade; but the home demand for woollen and worsted goods has also immensely expanded during the last fifteen years.

BEET-ROOT SUGAR.—The following is from the *Journal des Fabricants de Sucre* of July 27th:—"Floods of rain have followed the violent storms which have borne devastation into the North, l'Aisne, l'Oise, and La Somme; the beet-root again shoots forth vigorously, but has in many places lost its leaves from the effects of the hail, while the grey worms or other insects continue, wherever they have settled, the course of their destruction. Such are the salient facts of the position of a crop the appearance of which begins to manifest itself, although its result is yet difficult to estimate. Thus, as we have previously said, a good part of the crop, about two-thirds, is out of the question; its return will reach probably more than that of the average; as to the rest it is impossible to make the least valuation. With these late rains it is to be feared that the plant will for a long time remain green, and will then ripen badly. On the other hand, the beet-root which has lost its leaves will be retarded, and the new leaves will form to the prejudice of the saccharine part. In Germany and Belgium where they suffer the same phenomena of temperature as in France, there exists also a great deal of uncertainty about the future of the crop, which everyone agrees to consider as incapable of exceeding that of the past year, which, in the Zollverein, reached the amount of 165,000 tons, and which, compared to a normal year, such as that of 1862-63, was much better than in France. Taken altogether, it seems to follow from this information and these estimates, that, on the whole, there will be this year in Europe at least as much sugar as last year, and that the surplus, if surplus there should be, depends entirely on the temperature from now to the end of September, that is to say, from

Publications Issued.

LES ŒUVRES DE LAVOISIER. Edited by M. Dumas. 3rd volume. Paris.—M. Dumas, of the French Institut, has just presented the third volume of the works of the famous chemist Lavoisier to the Academy of Sciences of Paris. All the world knows how vast were the services of that great chemist, but few are aware, perhaps, that he fell a victim on the scaffold. M. Dumas' work will greatly increase the interest that surrounds the name of Lavoisier, who was not only a chemist, but a labourer in almost all branches of physical science. Amongst the few practical remains of his labours that exist is a gigantic thermometer which Lavoisier constructed, and which still exists in the cellars of the Observatory of Paris. The object of this instrument was to exhibit variations of temperature however slight, and each degree is represented on the scale by a space of four inches. It appears, according to the statement of the Imperial astronomer, M. Le Verrier, that its indications do not agree with those of other instruments, and it is proposed by him that another instrument should be constructed on the same scale, in order to correct this discrepancy. It appears also that Lavoisier contributed largely to the scientific and administrative reports which appeared under the name of his friend Bailly, who fell with him under the revolutionary axe; the notes left by Lavoisier on this subject are very extensive, and M. Dumas has included the substance of them in the volume which has just been presented to the Academy of Sciences.

Notes.

PUBLIC WORKS IN PARIS.—The extent to which demolitions, changes, improvements, and ornamentation are being carried on in Paris is already without parallel; but it appears that what has been done during the last dozen years is, after all, merely a commencement. The Prefect of the Seine has asked for the large sum of two hundred and fifty millions of francs, or ten millions sterling, to carry on the work of transformation, and the Corps Législatif has acceded to the demand, backed, as it was, by the Imperial Government, but with a protest in the form of a minority of 50, the majority numbering 173. The question is a mixed one, composed of political, social, and industrial elements. One party argues that the amount of work projected is far too large, and the expense ruinous; another that the workmen of certain trades, such as masons, carpenters, joiners, and painters, are being drawn to the metropolis in vast numbers, to the detriment of other parts of the country, with the further danger of their own demoralisation from the fact of their being withdrawn from their families and their connections, and flung into the turmoil of a luxurious and crowded city, where living is dear, and temptation to excess of all kinds great, and, in addition to all this, with the possible danger in prospect of an end of the work, a great fall in wages, and general discontent; a third holds that, however desirable may be the changes projected, it would be far more economical, and more conducive to the general well-being and comfort of the population, if execution were spread over a greater space of time. These are no doubt very serious questions, and deserve the attention of all political and social economists, who, moreover, can hardly expect ever to have such another extraordinary case presented for their study as that now furnished them in Paris. The large sum in question is to be raised on terminable annuities of sixty years, the issue of which is to be spread over a term of four years. Of course the exact application of the whole of this money cannot yet be known; but some important items are already settled. In the first place, the cost of piercing new streets and opening up various parts of the

town, which are now crowded, ill-drained, and inconvenient, is estimated at seventy-five millions, or three millions sterling. Another great work is the conversion of the old military road, which now forms the outer ring of Paris, into a series of noble boulevards; the present road is only about thirty feet in width, the new boulevards will be four times as wide, and will be planted with four rows of trees, two rows on each side, with a promenade between. The entire length of these new exterior boulevards will be more than twenty miles. An immense garden or pleasure ground is being made at the Buttes Chaumont or Saint Chaumont, lately one of the wilds of Paris, a huge irregular piece of ground where plaster quarries have existed for centuries. The new *parc* will cover more than fifty-five acres. The ground, having been excavated in parts to depths of from one to two hundred feet, will be partly laid out in terraces, and one great hollow is being converted into a lake of considerable size. On a promontory is being constructed an exact counterpart of the Temple of the Sibyl at Tivoli. This park will be a great boon to the population of this almost inaccessible and heretofore deserted part of Paris. Amongst the buildings to be executed are, the new opera house, which is considerably advanced, and the Hôtel Dieu, which is to be rebuilt. The reconstruction of this hospital has given rise to much controversy, there being a strong opinion against its re-erection on a small island, but the opposite party has triumphed, and the new Hôtel Dieu is to be built, according to the plan proposed some time since, and published in the *Journal*, on the same island but on the opposite bank to that occupied by the existing hospital. It will be nearly in face of the Palais de Justice, and behind the new Tribunal of Commerce, will cause the suppression of nearly all the old narrow streets still existing in that half of the old city, and will have the Seine and the Quay Napoleon on one side, and wide avenues on each of the other three sides. The counter project of erecting only a small hospital of reception on the island, and a much larger one, in direct communication with it by means of an underground railway, in a more salubrious situation away from the river, was rejected on account of the alleged inconvenience which would result from its adoption, not only to the patients themselves, but to the medical men and pupils of the medical schools. Amongst the improvements to be introduced into the new hospital are mentioned the placing of the kitchens, bath-rooms, store-rooms, and other subsidiary departments in the underground floor, and the connecting the whole together by means of a railway. The ground floor, as well as the upper stories of the building, are to be devoted to sick wards, each being provided with a spacious parlour or day gallery, washing rooms, and a shaft down which soiled linen and everything to be got rid of will descend direct to the vaults underground. A lift, large enough to hold a man sitting or lying, is to serve the whole of the floors. Amongst the more ornamental works now in course of execution or to be carried out, are, the placing of sixty new candelabra on the Place de la Concorde, which is already lighted by as many such lamps, and by eight rostral columns, each carrying two lights; the place will be illuminated by no less than a hundred and thirty-six large gas jets. The number of lamps along the whole length of the avenue of the Champs Elysées is also to be doubled. The angular spaces opposite the front of the Church of the Madeleine have been planted with trees of several years' growth, and supplied with fountains, flowers, and seats, fixed and moveable. The decoration of the walls of the great court of the Hôtel des Invalides, with mural historical paintings, by M. Masson, is proceeding rapidly, and those portions which are finished are spoken of favourably. The Hôtel de Ville is being thoroughly renovated, outside as well as inside; and amongst other decorations in hand is that of the Municipal Council Chamber by the painter Yvon. The subjects selected for this purpose are four episodes memorable in the history of the city: Clovis, habited in Roman purple,

making his entry into the capital; Philippe Auguste placing his children under the protection of the Municipality of Paris, previous to his departure for the Holy Land; Francois I. laying the first stone of the Hôtel de Ville; Napoleon III. signing the decree annexing the suburban communes to the City.

COLLECTION OF LEADEN ANTIQUITIES.—The city of Paris has just purchased, for the sum of eighteen thousand francs, a very curious collection of old objects in lead and pewter found in the Seine. These leads, as they are called, are mostly cast, but in some cases are hammered *repoussé* work, and are divided into nine groups—Badges and insignia of the old industrial corporations; those of religious fraternities; those of officials attached to the church; and those worn by persons connected with the royal household; medals; pilgrims' badges; popular images; political emblems; and miscellaneous. The collection has been placed in the library of the Hôtel de Ville.

DANGER OF TOUCHING A BODY STRUCK BY LIGHTNING.—M. Bourdin, who has reported to the Academy of Sciences of Paris on the effects of lightning, from the year 1835 to 1863, gives two extraordinary instances of persons being injured by contact with the bodies of others who had been struck. In one case, which happened in June, 1854, a man was killed by lightning near the Jardin des Plantes, and the body remained for some time exposed to heavy rain. When the storm had passed two soldiers were about to raise the body, when they both received violent shocks. In the second case, two artillerymen were ordered to raise up some telegraphic posts which had been thrown down during a storm at Zara, in Dalmatia; they took hold of the telegraphic wires, felt first a slight shock, and then were immediately afterwards thrown down. Both had their hands burnt, and one was killed. The other, in attempting to rise, fell immediately upon touching the elbow of a comrade who had run to his aid. This last was also thrown down, experienced a severe shock, and his arm was burnt at the place where the other had touched it. To avoid the danger of such secondary accidents, M. Bourdin recommends the discharge of the electricity from the mouth or other part of the body first struck by means of a whip of straw, or some such conductor, placed in communication with the earth, taking care, of course, to surround the same with a good non-conductor at the parts where it is taken hold of.

Patents.

From Commissioners of Patents Journal, July 28th.

GRANTS OF PROVISIONAL PROTECTION.

Automaton lay-figure—1738—W. E. Gedge.
Blinds, rollers for window—1847—W. Meddowcroft.
Bolts, rivets, and spikes, metallic—1796—E. H. Waldenstrom.
Boxes—1789—A. V. Newton.
Bricks—1748—W. R. Lake.
Bridges, aqueducts, &c., suspended—4765—S. B. Labouret.
Carpets, paper as a substitute for—1873—A. H. Platt.
Carriages, axles for—1762—S. Wright.
Carriages, break for wheel—1810—W. E. Newton.
Casks or barrels, setting up—1764—W. Clapperton and A. Lyle.
Castings, compound metallic—1885—G. Nimmo.
Chains, bracelets, necklaces, &c.—1794—P. M. C. Béziel.
Coffins and air-tight receptacles—1804—J. George.
Confectionery, pearled or ornamented—1819—H. Schooling.
Copper and gold, separating gold from ores containing—1855—A. E. Molin.
Cotton, doubling and drawing—1739—F. Delamare-Deboutteville.
Crinoline steel, &c., protecting—1883—W. Edwards.
Engines, locomotive—1754—C. de Bergue.
Engines, traction—1836—M. H. Keene.
Envelopes, securing—1853—S. Tripp.
Fences and baskets, ornamental—1806—W. Goulding.
Fibres, producing—1881—H. E. Gilles.
Food for horses—1826—R. Hineson.
Fustian, machinery for cutting—1814—B. Collins and J. Butterfield.
Gas, ammoniacal liquors for purifying—1818—G. T. Livesey.
Gas meters, dry—1732—G. Lizars.
Gas tubing, flexible—1861—W. R. Lake.
Generators, steam boilers or—1869—A. Barclay.
Guano, &c., artificial—1877—D. McCrummen.

Gun barrels—1738—H. P. Tipper.
Handles of smoothing irons, &c.—1798—T. Sheldon.
Locks and keys—1812—J. F. Heather.
Locks and latches—1782—G. Carter.
Mats, matting, and brushes—1758—G. and D. Hurn.
Mattress—1853—S. Dummere.
Metals, ingot moulds and casting—1849—J. Clayton.
Oils, lamp—1768—W. Jenkins.
Optical illusions, production of—1688—G. Bonelli.
Organs, harmoniums, &c.—1802—J. Hopkinson and J. Whitelock.
Oxygen, producing—1780—H. Beigel.
Paper board and paper, machinery for making—1787—J. F. Jones.
Paper board, machines for making—1756—J. F. Jones.
Petroleum, decantation and raising of—1724—P. Jacovenco.
Pianos, tuning—1742—R. A. Brooman.
Pitch, dissolving—1770—R. A. Brooman.
Presses—1869—W. Hughes.
Railways, permanent way of—1842—J. E. Wilson.
Reaping machines—1824—W. S. Underhill, A. H. Corden and J. Corden.
Sheet metal, cutting, punching, and bending—1728—R. H. Leese.
Shoeing horses—1887—T. H. Ince.
Signal for calling cabs, day and night—1113—E. Wilson.
Signals on board ships—1772—F. M. Gisborne.
Steam boilers, preventing the incrustation of—1734—W. E. Newton.
Steam, generating—1622—M. P. W. Boulton.
Steel, conversion of iron into—1778—J. Jobson and J. F. Dickson.
Steel, &c., strengthening shields of—1225—T. H. Campbell.
Smoke, apparatus for consuming—1897—W. Clark.
Switches, railway—1786—J. H. Johnson.
Telegraphs, electric—1784—W. Thomson and C. F. Varley.
Tents or chambers for photographers, portable dark—1808—J. Willis.
Tobacco, &c., pouch for holding—1871—W. A. Richards.
Trains, signalling, lighting, and communication between all parts of—1492—K. Howarth.
Type, apparatus for composing—1845—A. Mackie and J. P. Jones.
Vapours and gases, cooling or condensing—1875—T. Metcalf, H. Metcalf, and T. Clayton.
Vessels, propelling—1762—J. Calvert.
Volatile liquids, self-acting apparatus for obtaining a circulation of—1816—H. A. Dufrene.
Washing machines—1744—W. H. Davey.
Waterclosets, supplying disinfecting liquids to—1879—C. Nicholas.
Water, apparatus and equipments for persons employed under—1840—A. Denayrowze.
Weaving, printing threads used in—1730—R. A. Brooman.
Woods, staining and graining—1851—J. M. and J. M. Murphy.
Wool, &c., opening and straitening—1865—J. Thornton.

INVENTION WITH COMPLETE SPECIFICATION FILED.

Valves, slide—1893—R. C. Bristol.

PATENTS SEALED.

274. E. P. Colquhoun and J. P. Ferris.	324. W. H. Latham and F. C. W. Latham.
275. E. P. Colquhoun and J. P. Ferris.	334. H. Masters.
279. J. Sainty.	335. C. Henderson.
286. J. Hughes.	351. C. Field.
287. C. A. Wheeler.	370. A. V. Newton.
288. A. S. Stocker.	376. E. Lord.
292. C. Lungle.	396. A. V. Newton.
298. W. Vale.	421. J. von der Poppenburg.
307. F. Row.	1058. C. F. Cotterill.

From Commissioners of Patents Journal, August 1st.

PATENTS SEALED.

301. B. L. Mosely.	424. J. Purdey.
310. J. A. Phillips.	425. B. Thompson.
315. R. A. Brooman.	426. B. Thompson.
319. R. M. Alloway.	430. A. V. Newton.
326. R. Shaw.	455. J. Brown.
328. A. Steven.	456. J. O. Christian, J. Charlton, and H. Charlton.
363. J. C. C. Halkett.	466. T. Orden.
371. J. Dale.	512. W. E. Newton.
380. W. E. Newton.	1308. J. R. Cooper.
401. R. W. Thomson.	
408. E. J. C. Welch.	

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

2101. J. Dickson.	2141. E. Burnett.
2100. J. Leetch and B. Mathew.	2180. G. Haseltine.
2111. J. and H. Redgate.	2311. S. A. Bell and T. Higgins.
2130. W. Spence.	2338. T. Clements, P. and J. Llewellyn & J. W. Jones.
2169. J. W. Woodford.	2148. E. T. Hughes.
2181. G. A. Biddell.	2297. C. E. Spagnolletti.
2126. R. Low and W. Duff.	

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

1731. W. Hartley.	1811. W. Smith.
1724. C. Mather.	